NOTA: Acest desen nu constituie o obligatie de aplicare de către contractor.
El reprezintă doar un exemplu de circuit de cale utilizat la CFR si nu trebuie aplicat ca atare.

NOTE: It is not compulsory for the contractor to apply this drawing.
It is only an example of track circuit in use at CFR and shall be not applied as such.

Indice Index	Data Date	Modificare Modification/Revision	Proiectant Designer	Aprobat Consultant Approved Consultant	Aprobat CFR Approved CFR
D					
C					
B					
A					

GUVERNUL ROMANIEI
ROMANIAN GOVERNMENT

PROIECT FINANȚAT DE UNIUNEA EUROPEANĂ
EUROPEAN UNION FINANCED PROJECT

CLIENT / CLIENT

C.N.C.F. "C.F.R." - S.A.

ITALFERR
GRUPPO FERROVIE DELLO STATO
Joint Venture leader

CONSULTANT / CONSULTANT

			Data Date	Semnătură Signature
Aprobat Approved	Şef proiect Project manager	R. Liuzza	12.2011	
Aprobat Approved	Coordonator Secţiune 1 Section 1 Coordinator	C. Gambelli	12.2011	
Verificat Checked	Expert Cheie Key Expert	P. Amodio	12.2011	

SUBCONTRACTANT / SUBCONTRACTOR

Aprobat Approved	Responsabil Subconsultant Subconsultant Responsible	A. Stanciu - Dinulescu	12.2011	
Întocmit Elaborated	Proiectant Designer	Angelescu Sergiu	12.2011	

Reabilitarea liniei de cale ferata Braşov - Simeria, parte componentă a coridorului IV Pan European, pentru circulaţia trenurilor cu viteza maximă de 160 km/h,
Tronsonul : Braşov - Sighişoara
Rehabilitation of the railway line Braşov - Simeria, component Part of the IV Pan-European Corridor, for the trains circulation with maximum speed of 160 km/h,
Section : Braşov - Sighişoara

Proiect/Project
2004/RO/16/P/PA/003

Faza / Phase:
D.E. / D.D.

Denumire desen / Drawing Title :

Statia / Station FELDIOARA
Fise de montaj rama aparataj receptie 1
Wiring diagrams for receiving equipment frame 1

Codificare / Codification System	Scara / Scale Fără / No scale	LOT / LOT	Nr. / No 01 / 9
EA51 01 E 07 BX SE 00 7 2 013 1			

RAMA APARATAJ RECEPTIE 1 (FI1)

	1	2	3	4	5	6	7	8
8	5L-CI	② 5L-BDE	6L-CI	③ 6L-BDE				
7	1L-CI	① 1L-BDE	2L-CI	③ 2L-BDE	IIIL-CI	① IIIL-BDE	IVL-CI	③ IVL-BDE
6	(9-17)a-Sil	① (9-17)a-BDE	(9-17)b-Sil	① (9-17)b-BDE	11-Sil	③ 11-BDE	13-15-Sil	② 13-15-BDE
5	033-CI	③ 033-BDE	043-CI	① 043-BDE	1-7-Sil	② 1-7-BDE	3-5-Sil	① 3-5-BDE
	FI1—FATA					FI1—SPATE		
4	41 FC-B (9-17)a	42 FC-B (9-17)b	43 FC-B 11	44 FC-B 13-15		44A	43A	42A FC-B 6L
3	31 FC-B 033	32 FC-B 043	33 FC-B 1-7	34 FC-B 3-5		34A FC-B IVL	33A FC-B IIIL	32A FC-B 2L
2	2x0,5A							
1	11 IP-2 033/043	12 IP-2 1-7/3-5	13 IP-2 (9-17)a/(9-17)b	14 IP-2 11/13-15		16 IP-2 1L/2L	17 IP-2 IIIL/IVL	18 IP-2 5L/6L

01	02	03	04	05	06	07	08	09	010	011	012	013	014	015	016
14x100Ω /0,3A															

Statia: FELDIOARA

EA51 01 E 07 BX SE 007 2

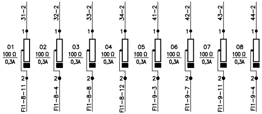
9
41A FC−B 5L
31A FC−B 1L
19

FI1−FATA

41	(9−17)a	42	(9−17)b	43	11	44	13−15
1	FI1−9−1	1	FI1−9−5	1	FI1−9−9	1	FI1−9−2
2	05−1	2	06−1	2	07−1	2	08−1
3	13−1 61−11	3	13−5 63−11	3	14−1 65−11	3	14−5 67−11
4	13−2 61−71	4	13−6 63−71	4	14−2 65−71	4	14−6 67−71

31	033	32	043	33	1−7	34	3−5
1	FI1−8−9	1	FI1−8−2	1	FI1−8−6	1	FI1−8−10
2	01−1	2	02−1	2	03−1	2	04−1
3	11−1 51−11	3	11−5 53−11	3	12−1 55−11	3	12−5 57−11
4	11−2 51−71	4	11−6 53−71	4	12−2 55−71	4	12−6 57−71

11	033/043	12	1−7/3−5	13	(9−17)a/(9−17)b	14	11/13−15
1	31−3	1	33−3	1	41−3	1	43−3
2	31−4	2	33−4	2	41−4	2	43−4
3	FI1−3−1	3	FI1−3−5	3	FI1−3−9	3	FI1−3−13
4	8 FI1−5−2	4	8 11−8	4	8 12−8	4	8 13−8
5	32−3	5	34−3	5	42−3	5	44−3
6	32−4	6	34−4	6	42−4	6	44−4
7	FI1−3−3	7	FI1−3−7	7	FI1−3−11	7	FI1−3−2
8	4 12−4	8	4 13−4	8	4 14−4	8	4 16−4


31−2
32−2
33−2
34−2
41−2
42−2
43−2
44−2
1
2
01
100 Ω
0,3A
02
100 Ω
0,3A
03
100 Ω
0,3A
04
100 Ω
0,3A
05
100 Ω
0,3A
06
100 Ω
0,3A
07
100 Ω
0,3A
08
100 Ω
0,3A
FI1−8−11
FI1−8−4
FI1−8−8
FI1−8−12
FI1−9−3
FI1−9−7
FI1−9−11
FI1−9−4

	9		8		7		6		5		4		3		2		1
crt		crt		crt		crt		crt		crt		crt		Nr crt		Nr crt	
1		1		1		1		1		1		1		1			**Ax220** FI1−1−1
2		2		2		2		2		2		2		2			FI1−1−2
3		3		3		3		3		3		3		3			**0x220** FI1−1−9
4		4		4		4		4		4		4		4			FI1−1−10
12		12		12		12		12		12		12		12			
11		11		11		11		11		11		11		11			
13		13		13		13		13		13		13		13			
22		22		22		22		22		22		22		22			
21		21		21		21		21		21		21		21			
23		23		23		23		23		23		23		23			
32		32		32		32		32		32		32		32			
31		31		31		31		31		31		31		31			
33		33		33		33		33		33		33		33			
42		42		42		42		42		42		42		42			
41		41		41		41		41		41		41		41			
43		43		43		43		43		43		43		43			
52		52		52		52		52		52		52		52			
51		51		51		51		51		51		51		51			
53		53		53		53		53		53		53		53			
62		62		62		62		62		62		62		62			
61		61		61		61		61		61		61		61			
63		63		63		63		63		63		63		63			
72		72		72		72		72		72		72		72			
71		71		71		71		71		71		71		71			
73		73		73		73		73		73		73		73			
82		82		82		82		82		82		82		82			
81		81		81		81		81		81		81		81			
83		83		83		83		83		83		83		83			

FI1−2

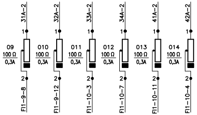
75Hz

FI1-SPATE

44A		43A		42A	6L	41A	5L
1		1		1	FI1-10-2	1	FI1-10-9
2		2		2	014-1	2	013-1
3		3		3	18-5 83-11	3	18-1 81-11
4		4		4	18-6 83-71	4	18-2 81-71

34A	IVL	33A	IIIL	32A	2L	31A	1L
1	FI1-10-5	1	FI1-10-1	1	FI1-9-10	1	FI1-9-6
2	012-1	2	011-1	2	010-1	2	09-1
3	17-5 77-11	3	17-1 75-11	3	16-5 73-11	3	16-1 71-11
4	17-6 77-71	4	17-2 75-71	4	16-6 73-71	4	16-2 71-71

16	1L/2L	17	IIIL/IVL	18	5L/6L	19	
1	31A-3	1	33A-3	1	41A-3	1	
2	31A-4	2	33A-4	2	41A-4	2	
3	FI1-3-4	3	FI1-3-8	3	FI1-3-12	3	
4	8 14-8	4	8 16-8	4	8 17-8	4	
5	32A-3	5	34A-3	5	42A-3	5	
6	32A-4	6	34A-4	6	42A-4	6	
7	FI1-3-6	7	FI1-3-10	7	FI1-3-14	7	
8	4 17-4	8	4 18-4	8	4 FI1-5-4	8	


31A-2
32A-2
33A-2
34A-2
41A-2
42A-2
1
2
09
010
011
012
013
014
100 Ω
0,3A
FI1-9-8
FI1-9-12
FI1-10-3
FI1-10-7
FI1-10-11
FI1-10-4

FI1-RANDUL 6

69		68		67		66		65		64		63		62		61	
			13-15-BDE		13-15-Sil		11-BDE		11-Sil		(9-17)b-BDE		(9-17)b-Sil		(9-17)a-BDE		(9-17)a-Sil
		12	0x220			12	0x220			12	0x220			12	0x220		
		11	FI1-6-11	11	44-3	11	FI1-6-9	11	43-3	11	FI1-6-7	11	42-3	11	FI1-6-5	11	41-3
				13	OS			13	OS			13	OS			13	OS
		32	7-33			32	5-33			32	3-33			32	1-33		
		31	7-53			31	5-53			31	3-53			31	1-53		
				33	8-32			33	6-32			33	4-32			33	2-32
		52	+24S2			52	+24S3			52	+24S1			52	+24S1		
		51	Ax220			51	Ax220			51	Ax220			51	Ax220		
				53	8-31			53	6-31			53	4-31			53	2-31
		72	OS			72	OS			72	OS			72	OS		
		71	FI1-6-12	71	44-4	71	FI1-6-10	71	43-4	71	FI1-6-8	71	42-4	71	FI1-6-6	71	41-4

FI1-RANDUL 5

59		58		57		56		55		54		53		52		51	
			3-5-BDE		3-5-Sil		1-7-BDE		1-7-Sil		043-BDE		043-CI		033-BDE		033-CI
		12	0x220			12	0x220			12	0x220			12	0x220		
		11	FI1-6-3	11	34-3	11	FI1-6-1	11	33-3	11	FI1-5-13	11	32-3	11	FI1-5-11	11	31-3
				13	OS			13	OS			13	OS			13	OS
		32	7-33			32	5-33			32	3-33			32	1-33		
		31	7-53			31	5-53			31	3-53			31	1-53		
				33	8-32			33	6-32			33	4-32			33	2-32
		52	+24S1			52	+24S2			52	+24S1			52	+24S3		
		51	Ax220			51	Ax220			51	Ax220			51	Ax220		
				53	8-31			53	6-31			53	4-31			53	2-31
		72	OS			72	OS			72	OS			72	OS		
		71	FI1-6-4	71	34-4	71	FI1-6-2	71	33-4	71	FI1-5-14	71	32-4	71	FI1-5-12	71	31-4

FI1–RANDUL 8

89		88		87		86		85		84		83		82		81	
											6L- BDE		6L–CI		5L- BDE		5L–CI
		12				12				12	0x220			12	0x220		
		11		11		11		11		11	FI1–7–9	11	42A–3	11	FI1–7–7	11	41A–3
				13				13				13	OS			13	OS
		32				32				32	3–33			32	1–33		
		31				31				31	3–53			31	1–53		
				33				33				33	4–32			33	2–32
		52				52				52	+24S3			52	+24S2		
		51				51				51	Ax220			51	Ax220		
				53				53				53	4–31			53	2–31
		72				72				72	OS			72	OS		
		71		71		71		71		71	FI1–7–10	71	42A–4	71	FI1–7–8	71	41A–4

FI1–RANDUL 7

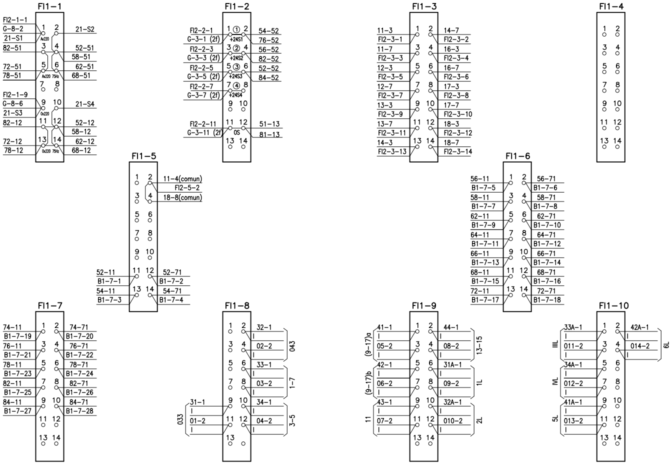
79		78		77		76		75		74		73		72		71	
			IVL–BDE		IVL–CI		IIIL–BDE		IIIL–CI		2L–BDE		2L–CI		1L–BDE		1L–CI
		12	0x220			12	0x220			12	0x220			12	0x220		
		11	FI1–7–5	11	34A–3	11	FI1–7–3	11	33A–3	11	FI1–7–1	11	32A–3	11	FI1–6–13	11	31A–3
				13	OS			13	OS			13	OS			13	OS
		32	7–33			32	5–33			32	3–33			32	1–33		
		31	7–53			31	5–53			31	3–53			31	1–53		
				33	8–32			33	6–32			33	4–32			33	2–32
		52	+24S3			52	+24S1			52	+24S3			52	+24S1		
		51	Ax220			51	Ax220			51	Ax220			51	Ax220		
				53	8–31			53	6–31			53	4–31			53	2–31
		72	OS			72	OS			72	OS			72	OS		
		71	FI1–7–6	71	34A–4	71	FI1–7–4	71	33A–4	71	FI1–7–2	71	32A–4	71	FI1–6–14	71	31A–4

RAMA FI1

BUCLE TENSIUNI

+24S1	+24S2	+24S3	+24S4	Ax220	0x220	0S
FI1–2–2	FI1–2–4	FI1–2–6		FI1–1–4	FI1–1–12	FI1–2–12
54–52	56–52	52–52		52–51	52–12	51–13
58–52	68–52	66–52		54–51	54–12	52–72
64–52	82–52	78–52		56–51	56–12	53–13
62–52		74–52		58–51	58–12	54–72
72–52		84–52		FI1–1–4	FI1–1–12	55–13
76–52				FI1–1–6	FI1–1–14	56–72
				62–51	62–12	57–13
				64–51	64–12	58–72
				66–51	66–12	68–72
				68–51	68–12	67–13
				FI1–1–6	FI1–1–14	66–72
				FI1–1–5	FI1–1–13	65–13
				72–51	72–12	64–72
				74–51	74–12	63–13
				76–51	76–12	62–72
				78–51	78–12	61–13
				FI1–1–5	FI1–1–13	71–13
				FI1–1–3	FI1–1–11	72–72
				82–51	82–12	73–13
				84–51	84–12	74–72
						75–13
						76–72
						77–13
						78–72
						84–72
						83–13
						82–72
						81–13
FI1–2–2	FI1–2–4	FI1–2–6				FI1–2–12

Statia: FELDIOARA


FI1-1
FI2-1-1
G-8-2
21-S1
82-51
72-51
78-51
FI2-1-9
G-8-6
21-S3
82-12
72-12
78-12
21-S2
52-51
58-51
62-51
68-51
21-S4
52-12
58-12
62-12
68-12
Ax220
Ax220 75Hz
Ox220
Ox220 75Hz
FI1-2
FI2-2-1
G-3-1 (2f)
FI2-2-3
G-3-3 (2f)
FI2-2-5
G-3-5 (2f)
FI2-2-7
G-3-7 (2f)
FI2-2-11
G-3-11 (2f)
54-52
76-52
56-52
82-52
52-52
84-52
51-13
81-13
①
②
③
④
+24S1
+24S2
+24S3
+24S4
0S
FI1-3
11-3
FI2-3-1
11-7
FI2-3-3
12-3
FI2-3-5
12-7
FI2-3-7
13-3
FI2-3-9
13-7
FI2-3-11
14-3
FI2-3-13
14-7
FI2-3-2
16-3
FI2-3-4
16-7
FI2-3-6
17-3
FI2-3-8
17-7
FI2-3-10
18-3
FI2-3-12
18-7
FI2-3-14
FI1-4
FI1-5
11-4(comun)
FI2-5-2
18-8(comun)
52-11
B1-7-1
54-11
B1-7-3
52-71
B1-7-2
54-71
B1-7-4
FI1-6
56-11
B1-7-5
58-11
B1-7-7
62-11
B1-7-9
64-11
B1-7-11
66-11
B1-7-13
68-11
B1-7-15
72-11
B1-7-17
56-71
B1-7-6
58-71
B1-7-8
62-71
B1-7-10
64-71
B1-7-12
66-71
B1-7-14
68-71
B1-7-16
72-71
B1-7-18
FI1-7
74-11
B1-7-19
76-11
B1-7-21
78-11
B1-7-23
82-11
B1-7-25
84-11
B1-7-27
74-71
B1-7-20
76-71
B1-7-22
78-71
B1-7-24
82-71
B1-7-26
84-71
B1-7-28
FI1-8
32-1
02-2
043
33-1
03-2
1-7
34-1
04-2
3-5
31-1
01-2
033
FI1-9
41-1
05-2
(9-17)a
42-1
06-2
(9-17)b
43-1
07-2
11
44-1
08-2
13-15
31A-1
09-2
1L
32A-1
010-2
2L
FI1-10
33A-1
011-2
IIIL
34A-1
012-2
IVL
41A-1
013-2
5L
42A-1
014-2
6L
1
2
3
4
5
6
7
8
9
10
11
12
13
14

EA51 01 B 07 BX SE 007 2 013 1 9/9